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INTELLECTUAL PROPERTY ADMINISTRATION  
FORT COLLINS, CO 80527-2400

EXAMINER
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LEROUX, ETIENNE PIERRE

ART UNIT	PAPER NUMBER
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2161

NOTIFICATION DATE	DELIVERY MODE
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ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/666,577	<b>Applicant(s)</b> XU ET AL.	
	<b>Examiner</b> Etienne P. LeRoux	<b>Art Unit</b> 2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,4,6-21,23-35,40,41 and 43-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,6-21,23-35,40,41 and 43-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Claim Status:***

Claims 1, 4, 6-21, 23-35, 40, 41 and 43-45 are pending and rejected as detailed below.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “tuple” in claim 1 is used by the claim to mean “statement,” while the accepted meaning of tuple is *a row which includes a set of related values, one for each column in a relational database management system.*<sup>1</sup> The term is indefinite because the specification does not clearly redefine the term. For purposes of this Office Action the claimed “tuple” will be interpreted as a statement.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1, 4, 6-10, 12-21, 23-35, 40, 41 and 43-45 are rejected under 35 U.S.C. 102(a) as being anticipated by Pub No US 2003/0145306 (Melahn et al).

Regarding claim 1, 10, 20, 34, 35, 40, 41, 45, Melahn discloses a first object identifier identifying a first object stored in the file system, wherein the first object comprises a first file stored in the file system [source file, para. 18 stored in repository 104, Fig 2], a second object identifier identifying a second object stored in the file system, the second object being related to the first object [target file is built from the source file using a build utility 112, para. 18], wherein the second object comprises at least one of a second file generated from the first file [target file is built from the source file using a build utility 112, para. 18] and metadata generated from the first file [build indicators of the source file and the target file are set to a common value, para. 36] and a relation identifier [build tools 114, para. 19, Fig 2, time stamp indicates up-to-date files, para. 21, version indicators, para. 28] identifying a relationship between the first object and the second object wherein the data model includes a tuple in a format and order comprising the first identifier, the relation identifier and the second object identifier [determine if a Host Source File is up-to-date with respect to a Repository Source File, step 164, Fig 3A, Select a Build Source File that matches the Repository Source File, step 170, Fig 3A]

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<sup>1</sup> Microsoft Computer Dictionary, Fifth Edition

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determining whether the first object in the file system is accessed [source file, para. 32], identifying a precondition associated with the first object in response to the first object being accessed [version of source file, para. 32] performing an action in response to the predetermined condition existing [build request, para. 32] wherein the relation identifier identifies the predetermined condition and action [build request, para. 32, includes repository indicator, name of file, location of file, name of source file, versioning information]

Regarding claim 4, 21, Melahn discloses wherein the relation identifier is a semantic of the first file [determining whether the repository target file is up-to-date regarding the source file, para. 9]

Note: Examiner interprets semantic as meaning

Regarding claim 6, Melahn discloses wherein the relation identifier comprises a property of the first object and the second object comprises a value of the property for the first object [build indicators of the source file and the target file are set to a common value, para. 36]

Regarding claim 7, Melahn discloses wherein the data model represents a function operable to be performed in the semantic file system [target file is built from the source file using a build utility 112, para. 18]

Regarding claim 8, 23, Melahn discloses wherein the function is associated with one or more of generating a view of the objects stored in the semantic file system, restricting access to an object in the file system, searching in the semantic file system, performing an action based on at least one predetermined condition, and performing archival functions in the semantic file system [Fig 2, repository 104]

Regarding claim 9, Melahn discloses wherein the relation identifier identifies a dependency between the first object and the second object [build indicators of the source file and the target file are set to a common value, para. 36]

Regarding claim 12, 28, Melahn discloses wherein the dependency is associated with one or more users or one or more applications [Fig 2, content developers 108]

Regarding claim 13, 24, 43 Melahn discloses wherein the dependency is used to generate file space views for the one or more users or for the one or more applications [access by specified content developers, para. 30]

Regarding claim 14, 31, Melahn discloses wherein the relation identifier identifies the second object as including property semantic information for the first object, the property semantic information including statistical information for the first object [time stamps for the files indicate when they were created or last updated, para. 36]

Regarding claim 15, Melahn discloses wherein the relation identifier identifies the second object as including context semantic information for the first object, the context semantic information being associated with access patterns for the first object [ para. 30, repository is configured to allow access by specified content developers]

Regarding claim 16, Melahn discloses wherein the first object is a file and the access patterns are associated with one or more other files accessed before or after the file [versioning information identifies specific version of the source file and the target file respectively, para. 32]

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Regarding claim 17, Melahn discloses wherein the relation identifier identifies the second object as including content-based semantic information associated with content of the first object [build report, para. 19]

Regarding claim 18, 32, Melahn discloses wherein the data model is used to represent multiple types of relation identifiers in a schema [file time stamp, WebDAV time stamp, indicator indicating when file was created or built, para. 35]

Regarding claim 19, 25, 26, Melahn discloses wherein the schema is modifiable to include a new relation identifier or to remove a relation identifier currently in the schema [target file can be built from a plurality of source files, para. 20]

Regarding claim 27, Melahn discloses wherein at least one of the plurality of relation metadata is determined through property inheritance from the schema [build utility 112 builds updated target files from source files using known build tools 114, para. 19]

Regarding claim 29, Melahn discloses extracting semantic information for the objects and storing the semantic information [build report may be stored in file system 124 for viewing by content developers 108, para. 19]

Regarding claim 30, Melahn discloses receiving a request for information stored in the file system and searching the semantic information to identify any files stored in the file system that meet the request [para. 32]

Regarding claim 33, 44, Melahn discloses returning results of the search using a precision variable, wherein the precision variable is related to a relevance of search results to the search

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request [at step 152, a repository associated with the file and a source file on which the file is dependent is identified, para. 33]

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Melahn as applied to claim 9 above, and further in view of Pub No US 2003/0033590 (Leherbauer), hereafter Leherbauer.

Regarding claim 10, Melahn discloses the elements of the claimed invention as noted above but does not disclose wherein the dependency is associated with a hierarchal file space. Leherbauer discloses wherein the dependency is associated with a hierarchal file space [para. 25]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Melahn to include above limitation as taught by Leherbauer for the purpose of establishing a baseline such that diverging modifications can be tracked [para. 25].

### ***Response to Arguments***

Applicant's arguments filed 4/4/2008 have been fully considered but they are not persuasive.



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Applicant Argues:

As noted above, the Office Action misinterpreted the term tuple to mean statement in claim 1 in order to reject the claim with Melahn et al. Thus, it is respectfully submitted that claim 1 is allowable because Melahn et al fails to disclose a tuple as commonly understood in the art.

Examiner Responds.

Examiner is not persuaded. During examination, examiner is required to give claim language its broadest reasonable interpretation in light of the specification. Claim 1 includes the following:

a relation identifier identifying a relationship between the first object and the second object, wherein the data model includes a tuple in a format and order comprising the first object identifier, the relation identifier and the second object identifier.

Paragraph 68 of the specification states:

0068] FIG. 4 illustrates a method 400, according to an embodiment of the invention, for performing an action in response to a predetermined condition. At step 400, the event module 252 of FIG. 2, for example, determines whether a file is accessed. If a file is accessed, the event module 252 determines whether a predetermined condition/action exists for the file (step 430). For example, meta data (e.g., one of the relations 126) associated with the file identifies one or more predetermined condition/action tuples (represented by the data model 260). Suppose the file Shrek depends on the file Ogre. One of the events associated with that relation may include <modified(Ogre): rebuild(Shrek)>, which specifies that Shrek is regenerated if Ogre is modified. Thus, the precondition is when the object Ogre is modified, and the action is the regeneration of

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the object Shrek. A stored relation may identify the precondition/action. At step 440, if the precondition exists (as determined in step 430), the action is performed (e.g., rebuilding the file Shrek in response to the file Ogre being modified).

The above usage of the term “tuple” in the specification of instant application is not (emphasis added) as would be commonly understood in the art as alleged by applicant. The following description of the term “tuple” by Chang (US Pat No 4,283,771) is how one of ordinary skill in the art would understand the term “tuple.”

US Pat No 4,283,771 - Chang

A data base can be considered as a structured collection of data which is accessible by concurrent users through computer systems. A relational model of data base, first described by E. F. Codd, Communications of the ACM, Volume 13, No. 6, p. 377, June 1970, views data in tabular form with a set of similar entries arranged in rows (tuples), and their many attributes aligned in columns (domains). A relational data base is a collection of many such tables. The items in the table may vary with time because of modifications, insertions, and deletions. Data in two or more relations (i.e., tables) can be interrelated through compatible attributes which appear in each of the relations. This allows the user to execute queries which have extensive selection criteria.

Chang discloses that a relational database comprises tables which has entries arranged in rows which are also known as tuples.

Furthermore, Microsoft Computer Dictionary Fifth Edition states:

tuple: In a database table (relation), a set of related values, one for each attribute (column). A tuple is stored as a row in a relational database management system.

Clearly, the disclosure by Chang and the Microsoft Computer Dictionary agree on the definition of the term “tuple.” On the other hand, the usage of the term “tuple” in the specification of instant application is not (emphasis added) as would of ordinary skill in the art would understand the term “tuple.” The specification of instant application states:

Specification of instant application:

For example, meta data (e.g., one of the relations 126) associated with the file identifies one or more predetermined condition/action tuples (represented by the data model 260). Suppose the file Shrek depends on the file Ogre. One of the events associated with that relation may include <modified(Ogre): rebuild(Shrek)>, which specifies that Shrek is regenerated if Ogre is modified. Thus, the precondition is when the object Ogre is modified, and the action is the regeneration of the object Shrek. A stored relation may identify the precondition/action.

Examiner after further consideration, maintains that interpreting the term “tuple” as a conditional statement is correct in light of the above except from the specification. One of ordinary skill in the art understands “statement” as - the smallest executable entity within a programming language – Microsoft Computer Dictionary. One of ordinary skill in the art would

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understand the specification language "predetermined condition/action tuples" is an executable entity within a programming language.

Melahn discloses:

[0044] The general selection step 162 can be performed using steps 164 through 170. At step 164, a determination is made as to whether the host source file is up-to-date with respect to the repository source file. In one embodiment, the repository source build indicator is compared to a host source build indicator associated with a host source file, if available, to determine if the host source file is up-to-date with respect to the repository source file. If the build indicators are time stamps indicating when a source file was created or last updated, the host source file is up-to-date with respect to the repository source file if the time stamp of the host source file matches the time stamp of the repository source file; otherwise the host source file is not up-to-date with respect to the repository source file. If the host source file does not exist, it is treated as if it is not up-to-date.

[0045] The build indicators facilitate the determination as to whether the host source file is the same as the repository source file. Accordingly, it is contemplated that the build indicators may be an indication other than a time stamp, such as file size (e.g., number of bytes), lines of program code, or essentially any feature that could be used to distinguish one file from another. For example, if the file sizes of the repository source file and the host source file are different, the host source file is not up-to-date with respect to the repository source file. Other means for distinguishing will be readily apparent to those skilled in the art and are considered within the spirit and scope of the present invention.

[0046] At step 166, the determination in step 164 is used to direct processing. If the host source file is not up-to-date (indicating that the host source file is different from the repository source file), processing proceeds at step 168. If the host source file is up-to-date (indicating that the host source file is the same as the repository source file), processing proceeds at step 170.

Melahn teaching of "at step 164, a determination is made as to whether the host source file is up-to-date with respect to the repository source file" and further "at step 166, the determination in step 164 is used to direct processing. If the host source file is not up-to-date (indicating that the host source file is different from the repository source file), processing proceeds at step 168" anticipates the claim language "wherein the data model includes a tuple in

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a format and order comprising the first object identifier, the relation identifier and the second object identifier.”

Applicant Argues:

Applicant states that the prior art made of record does not anticipate claims 20 and 40 for the same reasons as claim 1.

Examiner Responds:

Applicant is referred to above reasoning presented for claim 1.

Applicant Argues:

Applicant states on page 16:

Claims 15 and 31 further recite, inter alia, context or context-based semantic information that is "being associated with access patterns for the first object." The Office action cited to paragraph [0030] in Melahn” et al., which merely states that the repository 104 may be configured “to allow access by specified content developers.” Thus, it is respectfully submitted that Melahn et al., does not show the use of any “access patterns” for association with context-based semantic information as claimed.

Examiner Responds:

Examiner is not persuaded. The specification in paragraph 43 discloses:

Some examples of relation identifiers for context semantic information include no\_writes, no\_reads, accessed\_before, accessed\_by, and accessed\_from.

Examiner concludes that accessed by a specific used correctly reads on the claim terminology “access patterns.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Etienne P. LeRoux whose telephone number is (571) 272-4022. The examiner can normally be reached on Monday through Friday, 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Apu Mofiz can be reached on (571) 272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

7/11/2008  
/Etienne P LeRoux/  
Primary Examiner, Art Unit 2161

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